

Code.org Course Two: Task Lesson Plan

• Task Outline			
Session #/Title	Standard(s)	Time	Preparation/Materials
Session 1/ Unplugged: Graph Paper Programming	NGSS: K-2-ETS1, 3-5-ETS1 CC Mathematical Practices: 1, 2, 3, 6, 7, 8 CC Math Standards: 2.G.A. CC ELA Standards: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson One • Session 1 Video • Session 1 Activity Four-by-Fours Activity Worksheet • Session 1 Assessment Graph Paper Programming
Session 2/ Unplugged: Real-Life Algorithms: Paper Airplanes	NGSS: K-2-PS3, 3-5-ETS1 CC Mathematical Practices: 1, 2, 3, 6, 7, 8 CC Math Standards: 1.G.A., 2.G.A CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2	Two-30 minute sessions	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Two • Session 2 Video • Session 2 Activity Real Life Algorithms • Session 2 Assessment Everyday Algorithms • Paper for airplanes • Scissors
Session 3/ Maze: Sequence	PARCC/ SBAC Skills: Click/tap, Drag and drop, Select and drag/slide, Select object, Video player NGSS: K-2-PS3, 3-5-ETS1 CC Mathematical Practices: 1, 2, 5, 6, 7, 8 CC Math Standards: 1.OA, 2.OA, 3.OA CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2,	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Three • Maze Intro Video • Computers • Headphones

Course 2

	2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2		
Session 4/ Artist: Sequence	<p>PARCC/ SBAC Skills: Click/tap, Drag and drop, Select and drag/slide, Select object, Use video player ISTE: 1, 4, 6 CSTA: CT.L1, CL.L1, CPP.L1, CT.L2 NGSS:K-2-PS3, 3-5-ETS1 CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8</p> <p>CC Math Standards: 1.OA, 1.GA, 2.OA, 2.GA, 3.OA, 3.OA CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2</p>	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Four • Artist Intro Video • Computers • Headphones
Session 5/ Getting Loopy	<p>NGSS: K-2-PS3, 3-5-ETS1 CC Mathematical Practices: 1, 2, 4, 6, 7, 8 CC Math Standards: 1.MD CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2</p>	Two- 30 minute sessions	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Five • Session 5 Video Getting Loopy • Session 5 Activity Getting Loopy • Session 5 Assessment Getting Loopy • Computers • Headphones

Course 2

Session 6/ Maze: Loops	PARCC/ SBAC Skills: Click/tap, drag and drop, Select and drag/slide, Select object, Use video player NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 CC Math Standards: 1.OA, 2.OA, 3.OA CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Six • Computers • Headphones
Session 7/ Artist: Loops	PARCC/SBAC Skills: Click/tap, drag and drop, select object, use video player NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 CC Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 CC Math Standards: 1.OA, 1.GA,	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Seven • Computers • Headphones • Protractors
Session 8/ Bee: Loops	PARCC/SBAC Skills: Click/tap, Drag and drop, Select and drag/slide, Select object, Use video player NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 CC Math Standards: 1.OA., 2.OA., 3.OA, 3.GA CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Eight • Bee Loops Video • Computers • Headphones
Session 9/ Unplugged:	NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 CC Mathematical Practices: 1, 2, 3, 6, 7, 8	Two-30 minute	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Nine • Relay Programming Video 1

Course 2

Relay Programming	CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	sessions	<ul style="list-style-type: none"> • Relay Programming Video 2 • Session 9 Activity Relay Programming • Session 9 Relay Programming Assessment • Blank Paper or Index Cards
Session 10/ Bee: Debugging	PARCC/SBAC Skills: Click/tap, Drag and drop, Select object, Use video player NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 CC Math Standards: 1.OA, 2.OA, 3.OA CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Ten • Bee Debugging Video • Computers • Headphones
Session 11/ Artist: Debugging	PARCC/ SBAC Skills: Click/tap, Drag and drop, Select object, Use video player NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 CC Math Standards: 1.OA, 1.GA, 2.OA, 2.GA, 3.OA, 3.GA CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Eleven • Artist Debugging Video • Computers • Headphones
Session 12/ Unplugged:	NGSS: 3-5-ETS1 Mathematical Practices: 1, 2, 4, 6, 7, 8	Two-30 minute	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Twelve • Session 12 video

Course 2

Conditionals with Cards	CC Math Standards: 1.MD CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	sessions	<ul style="list-style-type: none"> • Session 12 Sample Program for Conditionals with Cards • Session 12 Assessment Conditionals with Cards • Playing Cards • Paper • Pens and Pencils
Session 13/ Bee: Conditionals	PARCC/ SBAC Skills: Click/tap, Drag and drop, Select and drag/slide, Select object, Use video player NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 CC Math Standards: 1.OA, 2.OA, 2.GA, 2.MD, 2.NBT, 3.OA CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Thirteen • Bee Conditionals Video • Computers • Headphones
Session 14/ Unplugged: Binary Bracelets	NGSS: K-2-PS3, K-2-ETS1 Mathematical Practices: 1, 2, 4, 6, 7, 8 CC ELA: SL.1, L.1, SL.2, L.2 SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1 -1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2 -1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3 -1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4 - 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5 -2.1.1, 2.1.2, 2.2.2, 2.3.2 6 -2.1.1, 2.1.2, 2.2.2	Two-30 minute sessions	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Fourteen • Session 14 Video • Session 14 Activity Binary Bracelets • Session 14 Assessment Binary Bracelets • Pens and Pencils • Scissors
Session 15/ Unplugged: The Big Event	NGSS: K-2-ETS1 Mathematical Practices: 1, 2, 6, 7, 8 CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2,	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Fifteen • Session 15 Activity The Big Event • Session 15 Assessment The Big Event • Session 15 Video

Course 2

	2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2		<ul style="list-style-type: none"> • Pens, pencils, and markers
Session 16/ Flappy	PARCC/SBAC Skills: Click/tap, Drag and drop, Scroll, Select and drag/slide, Select object NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 CC Mathematical Practices: 1, 2, 5, 6, 7, 8 CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Sixteen • Computers • Headphones
Session 17/ Play Lab: Create a Story	PARCC / SBAC Skills: Click/tap, Drag and drop, Scroll, Select and drag / slide, Select object ISTE: 1, 4, 6 CSTA: CT.L1, CL.L1, CPP.L1, CT.L2 NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 CC Mathematical Practices: 1, 2, 5, 6, 7, 8 CC Math Standards: 1.OA, 2.OA, 2.MD CC ELA: SL.1, L.1, SL.2, L.2, W.2, SL.3, L.3, W.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 6- 2.1.1, 2.1.2, 2.2.2	30 minutes	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Seventeen • Session 17 Video Create a Story • Computers • Headphones

Course 2

Session 18/ Unplugged: Your Digital Footprint FOR 5/6 Use Session 20: Course 3: Digital Citizenship	CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2	Two-30 minute sessions	<ul style="list-style-type: none"> • Code.org Course Two: Lesson Eighteen • Session 18 Pause & Think Online Video • Session 18 Video • Activity Animal Tracks Chart-Page seven of Document • Session 18 Assessment Digital Footprint • Pens and Pencils • FOR 5/6 <ul style="list-style-type: none"> • Code.org Course Two: Lesson Eighteen for 5 and 6 • Paper Craft Superheros- Pick a super hero, print and fold. • Session 18 Digital Citizenship Video • Session 18 Cyber Safety Video • Session 18 Assessment Digital Citizenship
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Session One: Unplugged-Graph Paper Programming		Timeframe: 30 minutes
Background: Students write an algorithm (a set of instructions) using a set of predefined commands to direct their classmates to reproduce a drawing.		
Materials:		<ul style="list-style-type: none"> • Session 1 Assessment Graph Paper Programming • Computers • Headphones
<ul style="list-style-type: none"> • Code.org Course Two: Lesson One • Session 1 Video • Session 1 Activity Four-by-Fours Activity Worksheet 		
Standard(s):		
<ul style="list-style-type: none"> • NGSS: K-2-ETS1, 3-5-ETS1 • CC Mathematical Practices: 1, 2, 3, 6, 7, 8 • CC Math Standards: 2.GA. • CC ELA Standards: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):		
<ul style="list-style-type: none"> • NGSS: K-2-ETS1-2, 3-5-ETS1-2 • CC Mathematical Practices: 1, 2, 3, 6, 7, 8 • CC Math Standards: 2.G.2 • CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will begin by introducing vocabulary words algorithm and program to students. • Teacher will explain how to play Graph Paper programming. • Teacher will project the arrow key onto the board. • Teacher will select a simple graph paper drawing and introduce the symbols in the 	<ul style="list-style-type: none"> • Students will practice Session 1 Activity Four-by-Fours Activity Worksheet in pairs. • Students will pick an image from the worksheet and discuss the algorithm to draw that image with their partner. • Students will convert the 	<ul style="list-style-type: none"> • Students will be assessed using the Session 1 Assessment Graph Paper Programming • Students can also be assessed by completing Stage 1: Graph Paper Programming Assessment 1 and 2 online.

Course 2

<p>arrow key.</p> <ul style="list-style-type: none">• Teacher will walk the class through translating the directions for the graph paper image using the algorithm into the program.• Teacher will instruct students to play the Session 1 Activity Four-by-Fours Activity Worksheet.• After students complete the Four by Fours activity worksheet, teacher will review the vocabulary words learned.	<p>algorithm into a program using symbols.</p> <ul style="list-style-type: none">• Students will trade programs with another pair and draw one another's image.• Students can repeat this process time permitting.	
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Session Two: Unplugged-Real-Life Algorithms: Paper Airplanes		Timeframe: Two 30 minute sessions
<u>Background:</u> This lesson calls out ways we use algorithms in our daily lives. This lesson also focuses on the bigger picture of computer science and how algorithms play an essential part.		
<u>Materials:</u> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Two • Session 2 Video • Session 2 Activity Real Life Algorithms • Session 2 Assessment Everyday Algorithms 		<ul style="list-style-type: none"> • Paper for airplanes • Scissors • Computers • Headphones
<u>Standard(s):</u> <ul style="list-style-type: none"> • NGSS: K-2-PS3, 3-5-ETS • CC Mathematical Practices: 1, 2, 3, 6, 7, 8 • CC Math Standards: 1.G.A., 2.G.A • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none"> • NGSS: K-2-PS3-2, 3-5-ETS1-2 • Mathematical Practices: 1, 2, 3, 6, 7, 8 • CC Math Standards: 1.G.1, 2.G.3 • CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review Lesson 1 and review the term algorithm. • Teachers will guide a whole group 	<ul style="list-style-type: none"> • Students will work in small groups or partners to complete Session 2 Activity Real Life Algorithms • students will work together to choose the 6 	<ul style="list-style-type: none"> • Students will be assessed using the Session 2 Assessment Everyday Algorithms. • Students can also be assessed by

Course 2

<p>lesson, asking students, “What did you do to get ready this morning?” Discuss things that are a daily part of their morning routine, recording answers on board. Number them in the order they happen in the morning routine.</p> <ul style="list-style-type: none">• Teacher will explain that algorithms can be created for the things we do every day.• Teacher will ask students how to make breakfast, brush their teeth, etc. listing the steps for the students.• Teacher will pass out the Real Life Algorithm Worksheet.• After students complete the Real-Life Algorithm worksheet, review the algorithms with the students. Ask the students how many were successful in making their classmates' paper airplanes?	<p>correct steps from the 9 total options.</p> <ul style="list-style-type: none">• Students will glue the correct steps in order onto a separate piece of paper.• Students will trade the finished algorithm with another group and let them use it to make their plane.	<p>completing Stage 2: Real-Life Algorithms: Paper Airplanes 1 and 2 online.</p>
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Session Three: Maze: Sequence

Timeframe: 30 minutes

Background:

Students write programs (algorithms for the computer) that get a character through a maze. They'll understand the importance of sequence in the programs they write.

Materials:

- [Code.org Course Two: Lesson Three](#)
- [Maze Intro Video](#)
- Computers
- Headphones

Standard(s):

- **PARCC/ SBAC Skills:** Click/tap, Drag and drop, Select and drag/slide, Select object, Video player
- **NGSS:** K-2-PS3, 3-5-ETS
- **CC Mathematical Practices:** 1, 2, 5, 6, 7, 8
- **CC Math Standards:** 1.OA.A, 2.OA.A, 3.OA.A
- **CC ELA:** SL.1, L.1, SL.2, L.2, SL.3, L.3
- **Ed Tech:** K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2

Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):

- NGSS: K-2-PS3-2, 3-5-ETS1-2
- CC Mathematical Practices: 1, 2, 5, 6, 7, 8
- CC Math Standards: 1.OA.A.1, 2.OA.A.1, 3.OA.3
- CC ELA: SL.1.1, L.1.6, SL.2.1, L.2.6, SL.3.1, L.3.6
- Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P

Teach, Engage, and Explore

Guided/Independent Practice

Evaluate (formative assessment)

Course 2

<ul style="list-style-type: none">• Teacher will ask students if they are familiar with the game Angry Birds.• Teacher will explain that they will be writing programs to help the Angry Bird locate a Pig.• The teacher will introduce “blockly” coding to students using the Maze Intro video.• Teacher will instruct students to complete the Stage 3: Maze Sequence online activity using the blockly coding.	<ul style="list-style-type: none">• Students will complete Stage 3: Maze Sequence 1-9 online using blockly coding to create a sequenced algorithm that will take the Angry Bird to the Pig.• Students will share strategies with the whole class.• Students will discuss the multiple strategies shared by the class that take the Angry Bird to the Pig.• If extra time, students will create their own maze sequence and challenge other students to complete it.	Students will be assessed by completing Stage 3: Maze Sequence 10-11 online.
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Session Four: Artist: Sequence		Timeframe: 30 minutes
<u>Background:</u> Students write programs to draw different lines and shapes.		
<u>Materials:</u> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Four • Artist Intro Video • Computers • Headphones 		
<u>Standard(s):</u> <ul style="list-style-type: none"> • PARCC/ SBAC Skills: Click/tap, Drag and drop, Select and drag/slide, Select object, Use video player • NGSS: K-2-PS3, 3-5-ETS • CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.A, 1.G.A.2, 2.OA.A, 2.G.A., 3.OA.A, 3.OA.A • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none"> • NGSS:K-2-PS3-2, 3-5-ETS1-2 • CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.1, 1.G.A.1, 1.G.A.2, 2.OA.1, 2.G.A.1, 3.OA.3, 3.G.A.2 • CC ELA: SL.1.1, L.1.5, L.1.6, SL.2.1, L.2.6, SL.3.1, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will brainstorm with students ways to tell someone else how to draw a picture. Ask students how you might do that with a computer? 	<ul style="list-style-type: none"> • Students will complete Stage 4: Artist: Sequence 1-10 online using Blockly coding to create a sequenced algorithm that will help the artist complete the picture. 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 4: Artist: Sequence 11-12 online.

Course 2

<ul style="list-style-type: none">• Teacher will introduce pixels and degrees to students using the Artist Intro Video.• Teacher will instruct students to complete the Stage 4: Artist Sequence 1-10 online.	<ul style="list-style-type: none">• Students may need to use protractors to help them visualize the angles they might need to use in their programming.• With time available, students can extend their learning by creating images on paper using rulers and protractors. Students will create a line drawing using only straight lines, and then create instructions to complete the drawing by describing the lines and angles. Students will exchange instructions and complete their partner's drawing.	
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Session Five: Unplugged: Getting Loopy		Timeframe: Two 30 minute sessions	
<u>Background:</u> This lesson introduces the programming concept of loops (repeated instructions) through a dance activity. Students will learn simple choreography and then be instructed to repeat it.			
<u>Materials:</u> <ul style="list-style-type: none">• Code.org Course Two: Lesson Five• Session 5 Video Getting Loopy• Session 5 Activity Getting Loopy		<ul style="list-style-type: none">• Session 5 Assessment Getting Loopy• Computers• Headphones	
<u>Standard(s):</u> <ul style="list-style-type: none">• NGSS: K-2-PS3, 3-5-ETS• CC Mathematical Practices: 1, 2, 4, 6, 7, 8• CC Math Standards: 1.MD• CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3• Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2			
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none">• NGSS: K-2-PS3-2, 3-5-ETS1-2• Mathematical Practices: 1, 2, 4, 6, 7, 8• CC Math Standards: 1.MD.4• CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6• Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P			
Teach, Engage, and Explore		Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none">• Teacher will review previous lesson.• Teacher will introduce the term loop by asking one student to walk around an object in the classroom. When the student finishes, they are asked to repeat.• Teacher asks the students if it would have been easier to		<ul style="list-style-type: none">• Students will learn the term 'loop' by performing dance moves in a repetitive pattern.• Students will practice looping dance using the two paged Session 5 Activity Getting	<ul style="list-style-type: none">• Students will be assessed by completing Stage 5: Getting Loopy 1 online/ Session 5 Assessment Getting Loopy on paper

Course 2

<p>ask the student to go around the room 4 times? What if we wanted you to do it 10 times?</p> <ul style="list-style-type: none">• Teacher introduces the term loop as "the action of doing something over and over again."• Teacher plays Session 5 Video Getting Loopy• Teacher passes out the Getting Loopy Worksheet.• Teacher will assist students and probe students to find ways to incorporate loops in the dance sequence.	<p>Loopy.</p> <ul style="list-style-type: none">• If time allows, students can search for dance videos online that include repetitive loops.	
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Session Six: Maze: Loops		Timeframe: 30 minutes
<u>Background:</u> Student write programs in the Maze environment using loops.		
<u>Materials:</u>		
<ul style="list-style-type: none"> • Code.org Course Two: Lesson Six • Computers • Headphones 		
<u>Standard(s):</u>		
<ul style="list-style-type: none"> • PARCC/ SBAC Skills: Click/tap, drag and drop, Select and drag/slide, Select object, Use video player • NGSS:K-2-PS3, K-2-ETS1, 3-5-ETS1 • CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.A, 2.OA.A, 3.OA • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u>		
<ul style="list-style-type: none"> • NGSS:K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.1, 2.OA.1, 3.OA.3 • CC ELA: SL.1.1, L.1.6, SL.2.1, L.2.6, SL.3.1, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review loops and why they are used. • Teacher will instruct students to complete Stage 6: Maze Loops 1-11 online using blockly coding. • Teacher will ask students to figure out how 	<ul style="list-style-type: none"> • Students will complete Stage 6: Maze: Loops 1-11 online using blockly coding to create a looping algorithm that will help the characters complete their goals. • Students will figure out how many 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 6: Maze: Loops 12-14 online.

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many fewer blocks they can use with a loop vs. without using a loop.	fewer blocks they can use by using a loop in their programming. <ul style="list-style-type: none">• If time allows, students will choreograph their own dance using loops and teach it to the class.	
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Session Seven: Artist: Loops		Timeframe: 30 minutes
<p><u>Background:</u></p> <p>Students write programs to draw different shapes while identifying patterns in their code. They learn about the programming concept of loops (repeated statements), which can be used to make their programs more efficient.</p>		
<p><u>Materials:</u></p> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Seven • Computers • Headphones • Protractors 		
<p><u>Standard(s):</u></p> <ul style="list-style-type: none"> • PARCC/SBAC Skills: Click/tap, drag and drop, select object, use video player • NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 • CC Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA, 1.G.A, 2.OA.1, 2.G.A, 3.OA.3, 3.G.A • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<p><u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u></p> <ul style="list-style-type: none"> • NGSS:K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.1, 1.G.A.1, 1.G.A.2, 2.OA.1, 2.G.A.1, 3.OA.3, 3.G.A.2 • CC ELA: SL.1.1, L.1.6, SL.2.1, L.2.6, SL.3.1, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review loops and why they are used. • Teacher will ask 	<ul style="list-style-type: none"> • Students will complete Stage 7: Artist: Loops 1-13 online using blockly coding to create a looping algorithm that will help the artist complete the picture. • Students may need protractors to help them understand 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 6: Maze: Loops 14-16 online.

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<p>students to name as many simple shapes as possible, focusing on shapes with equal sides and angles.</p> <ul style="list-style-type: none">• Teacher will ask students to think about how they would explain to someone how to draw that shape? Could they draw this using loops?• Teacher will instruct students to complete Stage 7: Artist Loops levels 1-13 online.	<p>different angle degrees.</p> <ul style="list-style-type: none">• If time allows, students will draw geometric shapes on paper using rulers and protractors, and create a set of directions for recreating their shapes. Students will trade papers to see if they can follow their classmate's directions.	
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Session Eight: Bee: Loops		Timeframe: 30 minutes
<u>Background:</u> Students write programs using loops in the Bee environment.		
<u>Materials:</u> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Eight • Bee Loops Video • Computers • Headphones 		
<u>Standard(s):</u> <ul style="list-style-type: none"> • PARCC/SBAC Skills: Click/tap, Drag and drop, Select and drag/slide, Select object, Use video player • NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 • CC Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA., 2.OA., 3.OA, 3.G.A • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none"> • NGSS: K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.1, 2.OA.1, 3.OA.3, 3.G.A.2 • CC ELA: SL.1.1, L.1.6, SL.2.1, L.2.6, SL.3.1, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review loops and why they are used. • Teacher will ask students what other elements of our programs could benefit from loops? How could we use loops to make the Bee 	<ul style="list-style-type: none"> • Students will complete Stage 8: Bee: Loops 1-12 online using blockly coding to create a looping algorithm that will help the bee complete his goal. 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 8: Bee: Loops 13-14 online.

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<p>programs more efficient?</p> <ul style="list-style-type: none">• Teacher will instruct students to complete Stage 8: Bee Loops online using blockly coding incorporating a looping algorithm to help the bee complete his goal.	<ul style="list-style-type: none">• Students will try to incorporate more moves into their loops.	
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Session Nine: Unplugged: Relay Programming		Timeframe: Two 30 minute sessions
Background: Students run a relay race, where they dash across the yard to write an algorithm based on a "Graph Paper Programming" image. They can only write one instruction at a time and if there's an error, they have to erase everything back to the error.		
Materials: <ul style="list-style-type: none"> • Code.org Course Two: Lesson Nine • Relay Programming Video 1 • Relay Programming Video 2 • Session 9 Activity Relay Programming • Session 9 Relay Programming Assessment • Blank Paper or Index Cards 		
Standard(s): <ul style="list-style-type: none"> • NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 • CC Mathematical Practices: 1, 2, 3, 6, 7, 8 • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson): <ul style="list-style-type: none"> • NGSS: K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • Mathematical Practices: 1, 2, 3, 6, 7, 8 • CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review previous lesson, graph paper programming and looping. • Teacher will introduce the term, debugging as "finding and fixing problems in your algorithm or program." • Teacher will review graph paper programming with a refresher graph paper programming image, either one the students have already seen or an 	<ul style="list-style-type: none"> • Students will play "Relay Programming" in groups of 3-5 using the Relay Programming Activity Sheets. • Students will work together to debug the graph paper image. 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 9: Relay Programming Assessment: Debugging 1-2 online.

<p>entirely new one.</p> <ul style="list-style-type: none"> • Teacher will tell students that they are going to do the same kind of thing today, but instead of controlling each other, they will work together to create a program one symbol at a time. • Teacher will explain how to play “Relay Programming.” • Teacher will divide students into groups of 3-5 in relay style lines. • Teacher will place an identical image at the other end of the room/gym/field from each team. • Teacher will have the first student in each line run over to the image, review it, and write down the first symbol in the program to reproduce that image. That student runs back and tags the next person in line and heads to the back of their line. • The next student runs to the image, reviews the image, reviews the program that has been written, and either debugs the program by crossing out an incorrect symbol or adds a new one. The first team to complete the image correctly wins! • Teacher can repeat this game several times increasing the level of difficulty each time. • After the game concludes, teacher will reflect with students about the importance of debugging our own work and the work of the programmer before them. Is it easier or harder having multiple people working on the same program? 		
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Session Ten: Bee: Debugging		Timeframe: 30 minutes
<u>Background:</u> Students are presented with a pre-written program that fails to complete the puzzle. Students will have to “debug” or fix the pre-written program.		
<u>Materials:</u> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Ten • Bee Debugging Video • Computers • Headphones 		
<u>Standard(s):</u> <ul style="list-style-type: none"> • PARCC/SBAC Skills: Click/tap, Drag and drop, Select object, Use video player • NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 • Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.A, 2.OA.A, 3.OA.A • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none"> • NGSS: K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.A.1, 2.OA.A.1, 3.OA.3 • CC ELA: SL.1.1, L.1.6, SL.2.1, L.2.6, SL.3.1, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review debugging with the students by asking students to think about problems they have to solve in everyday life. • Teacher will instruct students to complete Stage 10 Debugging lessons online, paying 	<ul style="list-style-type: none"> • Students will complete Stage 10: Bee: Debugging 1-10 online using Blockly coding to debug programs. • If time allows, students can go back into previous levels and purposefully 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 10: Bee: Debugging 11 online.

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<p>special attention to the 'bugs' in the program. Students will be tasked with finding errors in programming and 'debugging' them.</p> <ul style="list-style-type: none">• Teacher will observe students working on debugging programming, and will identify strategies students are using to find the 'bugs'.• Teacher will instruct students to follow the path described by the code with their fingers to find potential bugs in the programming.	<p>put a 'bug' into their coding and challenge a classmate to find the 'bug' in the programming.</p>	
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Session Eleven: Artist: Debugging		Timeframe: 30 minutes
<p><u>Background:</u></p> <p>Students are presented with a drawing and a pre-written program that fails to create that drawing. Students will have to “debug” or fix the pre-written program.</p>		
<p><u>Materials:</u></p> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Eleven • Artist Debugging Video • Computers • Headphones 		
<p><u>Standard(s):</u></p> <ul style="list-style-type: none"> • PARCC/ SBAC Skills: Click/tap, Drag and drop, Select object, Use video player • NGSS:K-2-PS3, K-2-ETS1, 3-5-ETS1 • Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA, 1.G.A, 2.OA, 2.G.A, 3.OA.A.3, 3.G.A.2 • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<p><u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u></p> <ul style="list-style-type: none"> • NGSS:K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.1, 1.G.A.1, 1.G.A.2, 2.OA.1, 2.G.A.1, 2, 3.OA.3, 3.G.A.2 • CC ELA: SL.1.1, L.1.6, SL.2.1, L.2.6, SL.3.1, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review debugging by bringing the group together and discussing debugging 	<ul style="list-style-type: none"> • Students will complete Stage 11: Artist: Debugging 1-10 online using 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 11: Artist: Debugging 11-12 online.

Course 2

<p>tactics and difficulties. Discuss easiest bugs to find, hardest bugs to find, and things students are looking for in the programs.</p> <ul style="list-style-type: none">• Teacher will instruct the students to complete Stage 11: Artist Debugging online. While students are completing the lessons, teacher will remind students that sometimes the easiest way to find out what's wrong with a program is to watch it fail.• Teacher will instruct students to watch the program fail before it's fixed in order to find the bug in the program.	<p>blockly coding to debug programs.</p> <ul style="list-style-type: none">• Students will work on finding the bugs in the programming and fixing them so the artist will complete his goal.	
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Session Twelve: Unplugged: Conditionals with Cards		Timeframe: Two 30 minute sessions
<u>Background:</u> To learn about conditional statements, students play a card game and create rules like “If I draw a red card, I get a point” and “If I draw a black card, you get a point.”		
<u>Materials:</u> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Twelve • Session 12 Video • Session 12 Sample Program for Conditionals with Cards • Session 12 Assessment Conditionals with Cards • Playing Cards • Paper • Pens and Pencils 		
<u>Standard(s):</u> <ul style="list-style-type: none"> • NGSS: 3-5-ETS1 • Mathematical Practices: 1, 2, 4, 6, 7, 8 • CC Math Standards: 1.MD.C.4 • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none"> • NGSS: 3-5-ETS1-2 • Mathematical Practices: 1, 2, 4, 6, 7, 8 • CC Math Standards: 1.MD.4 • CC ELA: SL.1.1, SL.1.2, L.1.6 SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6 • Ed Tech: K-1.1.1.1 a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review debugging with students. • Teacher will introduce the vocabulary word conditionals as "statements that only run under certain conditions." • Teacher will introduce concept of 'one condition' 	<ul style="list-style-type: none"> • Students will learn about the term "conditionals" and will identify several "IF" and "ELSE" statements. • Students will play Conditionals with Cards as teams. 	<ul style="list-style-type: none"> • Students will be assessed by completing Session 12 Assessment Conditionals with Cards

<p>language - if the class can be completely quiet for 30 seconds, they can do something like extra recess, dance party, sing a song. Teacher will count for 30 seconds. If the students succeeded, they do get the reward. If students were unable to be quiet for 30 seconds they do not get the reward.</p> <ul style="list-style-type: none">• Teacher will ask the class "what was the condition of the reward?" The condition was IF you were quiet for 30 seconds, you would get the reward. If you were quiet, the condition would be true and you would get the reward. If you weren't quiet, the condition would be false and the reward would not apply.• Teacher will challenge the class to come up with another conditional. (e.g. If you can guess my age correctly the class can give you applause. If I know an answer, I can raise my hand.)• Teacher will explain that sometimes we want to have an extra condition, in case the IF statement is not true. This extra statement is called an "ELSE" statement. If the IF condition is not met, we can look at the ELSE for what to do. (e.g. IF I draw a 7, everybody claps. Or ELSE everyone says "awwwwww.")• Teacher will explain that there is a 3rd option. What if I wanted you to clap if I draw a 7, or else if I draw something less than seven you say "yay", or else you say "awwwwww?" This is why we have the terms If, Else-If, and Else. If is the first condition, Else-If gets looked at only if the "IF" isn't true. Else gets looked at only if nothing before it is true.• Teacher explains Session 12 Sample Program for Conditionals with Cards.• Teacher will split class into teams and give each team a pile of cards (as many cards as team members).	<ul style="list-style-type: none">• Students will work in teams to determine how many points they earn on the Conditionals cards.	
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Course 2

<ul style="list-style-type: none">• Teacher will put one "program" up on the board for all to see. Teams will take turns drawing cards following the program and calculating how many points they score in each round.• Teacher will play this game with the class several times with several programs to help the students understand conditionals.• Once the students have had practice, teacher can encourage students to "nest" conditionals inside one another.• Teacher will wrap up and reflect about using conditionals inside blockly coding.• Teacher will ask students what other things they do during the day that use conditionals.		
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Session Thirteen: Bee: Conditionals		Timeframe: 30 minutes
Background: Students write programs using conditional statements using the Bee environment.		
Materials: <ul style="list-style-type: none"> • Code.org Course Two: Lesson Thirteen • Bee Conditionals Video • Computers • Headphones 		
Standard(s): <ul style="list-style-type: none"> • PARCC/ SBAC Skills: Click/tap, Drag and drop, Select and drag/slide, Select object, Use video player • NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 • Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.A, 2.OA.A, 2.G.A., 2.MD, 2.NBT, 3.OA.A • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson): <ul style="list-style-type: none"> • NGSS: K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • Mathematical Practices: 1, 2, 4, 5, 6, 7, 8 • CC Math Standards: 1.OA.1, 2.OA.1, 2.G.2, 2.MD.5, 2.NBT.A.4, 3.OA.3 • CC ELA: SL.1.1, L.1.6 SL.2.1, L.2.6, SL.3.1, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review Conditionals Cards activity with the class. When are conditionals useful? What are some of the conditionals we have 	<ul style="list-style-type: none"> • Students will complete Stage 13: Bee: Conditionals 1-12 online using Blockly coding to create programs using 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 13: Bee: Conditionals 11-12 online.

Course 2

<p>used so far?</p> <ul style="list-style-type: none">• Teacher will introduce the Stage 13: Bee conditionals levels with the students.• Teacher will instruct students to use conditionals in their blockly programming to collect nectar from the purple flowers if the flower has nectar, but to leave the flower if it doesn't have nectar.	<p>conditionals.</p> <ul style="list-style-type: none">• Students will use conditionals to program their bee to harvest nectar from flowers if the flower contains nectar, but to leave the flower if it doesn't have nectar.	
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Session Fourteen: Unplugged: Binary Bracelets		Timeframe: T
<u>Background:</u> Students create bracelets from a paper template that is a binary representations of the first letter of their name. Students learn that the same set of data can be represented in more than one way.		
<u>Materials:</u> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Fourteen • Session 14 Video • Session 14 Activity Binary Bracelets 		
<ul style="list-style-type: none"> • Session 14 Assessment Binary Bracelets • Pens and Pencils • Scissors 		
<u>Standard(s):</u> <ul style="list-style-type: none"> • NGSS: K-2-PS3, K-2-ETS1 • Mathematical Practices: 1, 2, 4, 6, 7, 8 • CC ELA: SL.1, L.1, SL.2, L.2 SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none"> • NGSS: K-2-PS3-2, K-2-ETS1-1 • Mathematical Practices: 1, 2, 4, 6, 7, 8 • CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review previous lesson. • Teacher will introduce the term binary - a way of representing information using only two options. • Teacher will discuss how computers use information in two ways using electricity. This electrical information is either "off" or "on". 	<ul style="list-style-type: none"> • Students will work individually, in pairs, or small groups to complete Session 14 Activity Binary Bracelets. • Students will convert letters into binary code and back again using the Binary Bracelet activity worksheet. • If there is extra time or materials, students can 	<ul style="list-style-type: none"> • Students will be assessed by completing the Session 14 Assessment Binary Bracelets.

Course 2

<p>Computers send information this way, and also stores information this way, sometimes as "positive" or "negative."</p> <ul style="list-style-type: none">• Teacher will ask how we convert information into binary, starting with letters.• Teacher will explain to how use Session 14 Activity Binary Bracelets and show Session 14 Video.• Teacher will pass out the Binary Decoder Key.• Teacher will demonstrate converting letters into binary and back again.• Teacher will write a coded message to the class in binary.	<p>create actual bracelets using thread and beads to represent their letter in binary.</p>	
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Session Fifteen: Unplugged: The Big Event		Timeframe: 30 minutes
<u>Background:</u> Students are introduced to the programming concept of “events,” which are actions that a computer constantly monitors for. The teacher will press buttons on a fake remote, and student have to shout specific phases depending on which button is pressed.		
<u>Materials:</u> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Fifteen • Session 15 Activity The Big Event • Session 15 Assessment The Big Event • Session 15 Video • Pens, pencils, and markers 		
<u>Standard(s):</u> <ul style="list-style-type: none"> • NGSS: K-2-ETS1 • Mathematical Practices: 1, 2, 6, 7, 8 • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u> <ul style="list-style-type: none"> • NGSS: K-2-ETS1-1 • Mathematical Practices: 1, 2, 6, 7, 8 • CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review previous lesson. • Teacher will introduce the term event - An action that causes something to happen. • Teacher will probe students to identify events in their day that give signals. • Show Session 15 Video 	<ul style="list-style-type: none"> • Students will work whole group to complete Session 15 Activity The Big Event game. 	<ul style="list-style-type: none"> • Students will be assessed by completing Session 15 Assessment The Big Event

Course 2

<ul style="list-style-type: none">• Teacher will project the Event-O-Matic-Inator on the board.• Teacher will ask students to determine what each button will do.• Teacher will ask the students to start another activity and interrupt them with the pressing of the buttons on the board.• Teacher will continue until students understand the different between actions that are guided by a plan and actions that are event driven.		
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Session Sixteen: Flappy		Timeframe: 30 minutes
<p><u>Background:</u></p> <p>Using the concept of “Events,” students will create their own game with events like “When the mouse is clicked, make the bird flap” and “When the bird hits the ground, end the game.”</p>		
<p><u>Materials:</u></p> <ul style="list-style-type: none"> • Code.org Course Two: Lesson Sixteen • Computers • Headphones 		
<p><u>Standard(s):</u></p> <ul style="list-style-type: none"> • PARCC/SBAC Skills: Click/tap, Drag and drop, Scroll, Select and drag/slide, Select object • NGSS: K-2-PS3, K-2-ETS1, 3-5-ETS1 • CC Mathematical Practices: 1, 2, 5, 6, 7, 8 • CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3 • Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2 		
<p><u>Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):</u></p> <ul style="list-style-type: none"> • NGSS:K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2 • CC Mathematical Practices: 1, 2, 5, 6, 7, 8 • CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6 • Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P 		
Teach, Engage, and Explore	Guided/Independent Practice	Evaluate (formative assessment)
<ul style="list-style-type: none"> • Teacher will review the previous lesson on events. • Teacher will introduce adding their own events to their coding. • Teacher will instruct students to create an event on the mouse click that controls the bird's movements and what happens when 	<ul style="list-style-type: none"> • Students will complete Stage 16: Flappy 1-9 online using blockly coding to create programs using events. • Students will control what happens to their bird when the mouse is clicked, and what happens to the bird when it crashes into an object. 	<ul style="list-style-type: none"> • Students will be assessed by completing Stage 16: Flappy 10 online.

Course 2

<p>the bird crashes into an object.</p> <ul style="list-style-type: none">• Teacher will introduce the idea of "collision detection," which is what happens when one object collides with or touches another object in the game.• Teacher will ask students what kind of collisions they have seen in their own games.• Teacher will challenge students to make their own games as unique as they can within the time constraints.• If time allows, teacher will ask students to share their games and their coding with the class.	<ul style="list-style-type: none">• If time allows, students will save and share their games and programming with their classmates.	
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Session Seventeen: Play Lab: Create a Story

Timeframe: 30 minutes

Background:

Students employ all the different programming concepts they have learned in the curriculum this far to make a customized, interactive story or game of their own.

Materials:

- [Code.org Course Two: Lesson Seventeen](#)
- [Session 17 Video Create a Story](#)
- Computers
- Headphones

Standard(s):

- **PARCC / SBAC Skills:** Click/tap, Drag and drop, Scroll, Select and drag / slide, Select object
- **NGSS:** K-2-PS3, K-2-ETS1, 3-5-ETS1
- **CC Mathematical Practices:** 1, 2, 5, 6, 7, 8
- **CC Math Standards:** 1.OA.A, 2.OA.A, 2.MD
- **CC ELA:** SL.1, L.1, SL.2, L.2, W.2, SL.3, L.3, W.3
- **Ed Tech:** K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5-2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2

Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson):

- NGSS: K-2-PS3-2, K-2-ETS1-1, 3-5-ETS1-2
- CC Mathematical Practices: 1, 2, 5, 6, 7, 8
- CC Math Standards: 1.OA.A.1, 2.OA.A.1, 2.MD.5
- CC ELA: SL.1.1, SL.1.5, L.1.6, SL.2.1, SL.2.5, L.2.6, W.2.6, SL.3.1, L.3.6, W.3.3, W.3.6
- Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b I, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.1.f I, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.2.a P, 2.1.2.b D, 2.2.1.b P, 2.2.1.c P, 2.2.1.d D, 2.2.1.e D, 2.2.1.f D, 2.2.1.h I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.2.b P 2.2.1.d P, 2.2.1.e P, 2.2.1.f P, 2.2.1.h D, 2.2.1.j I, 2.2.1.k I, 2.2.1.l I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.h P, 2.2.1.j D, 2.2.1.k D, 2.2.1.l D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.1.j P, 2.2.1.k P, 2.2.1.l P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P

Teach, Engage, and Explore

- Teacher will review the previous lesson, where students controlled their Flappy bird.

Guided/Independent Practice

- Students will complete **Stage 17: Play Lab: Create a Story 1-10** online using

Evaluate (formative assessment)

- Students will be assessed by completing **Stage 17: Play Lab: Create a Story 11** online.

Course 2

<ul style="list-style-type: none">• Teacher will introduce Play Lab: Create a Story. This is the most unstructured lesson, and so teachers might provide specific parameters for the stories students write.• Teacher will instruct students to complete Stage 17: Play Lab Create a Story levels 1-10 online.• Teacher will instruct students to share their completed stories with the class, and discuss the coding strategies they used.	<p>blockly coding to create a story using what students have learned about computer coding.</p> <ul style="list-style-type: none">• Students will share their stories with their class and the coding strategies they used.	
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Session Eighteen: Unplugged: Digital Footprint (K-3)		Timeframe: Two 30 minute sessions	
Background: Teachers introduce to students the idea that putting information about themselves online creates a digital footprint or “trail” that has consequences.			
Materials: <ul style="list-style-type: none">Code.org Course Two: Lesson EighteenSession 18 Pause and Think Online VideoSession 18 VideoActivity Animal Tracks Chart-Page Seven of DocumentSession 18 Assessment Digital FootprintPens and Pencils		<ul style="list-style-type: none">FOR 5/6<ul style="list-style-type: none">Code.org Course Two: Lesson Eighteen for 5 and 6Paper Craft Superheros- Pick a super hero, print and fold.Session 18 Digital Citizenship VideoSession 18 Cyber Safety VideoSession 18 Assessment Digital Citizenship	
Standard(s): <ul style="list-style-type: none">CC ELA: SL.1, L.1, SL.2, L.2, SL.3, L.3Ed Tech: K-1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 1-1.2.2, 1.3.1, 2.1.1, 2.1.2, 2.2.1, 2.2.2 2-1.1.1, 1.2.2, 1.3.1, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 3-1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.1, 2.3.2 4- 1.1.1, 1.1.2, 1.3.1, 1.3.3, 2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.3.2 5- 2.1.1, 2.1.2, 2.2.2, 2.3.2 6-2.1.1, 2.1.2, 2.2.2			
Lesson Learning Targets (which Content area and/or Ed Tech targets will be addressed in this lesson): <ul style="list-style-type: none">CC ELA: SL.1.1, SL.1.2, L.1.6, SL.2.1, SL.2.2, L.2.6, SL.3.1, SL.3.3, L.3.6Ed Tech: K-1.1.1.a I, 1.1.2.a P, 1.2.2.a I, 1.3.1.a I, 2.1.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.2.a I, 2.2.2.b I, 2.3.2.a I 1-1.2.2.a D, 1.3.1.a D, 2.1.1.a I, 2.1.2.a P, 2.1.2.b I, 2.2.1.a P, 2.2.1.b D, 2.2.1.c D, 2.2.2.a I, 2.2.2.b I, 2.2.2.c I, 2.3.1.a I, 2.3.2.a D 2-1.1.1.b P, 1.2.2.a P, 1.3.1.a P, 2.1.1.a D, 2.1.2.a P, 2.1.2.b D, 2.2.1.c P, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d I, 2.3.1.a D, 2.3.2.a P 3-1.1.2.d I, 1.3.1.c I, 1.3.3.c D, 2.1.1.a P, 2.1.2.b P, 2.2.1.j I, 2.2.2.a D, 2.2.2.b D, 2.2.2.c D, 2.2.2.d D, 2.3.1.a P, 2.3.2.b I 4- 1.1.1.e I, 1.1.2.d D, 1.3.1.c D, 1.3.3.c P, 2.1.1.c I, 2.1.2.a P, 2.2.1.j D, 2.2.2.a D, 2.2.2.b D, 2.2.2.d P, 2.3.2.b D 5-2.1.1.c D, 2.1.2.a P, 2.2.2.a D, 2.2.2.b P, 2.3.2.b P 6-2.1.1.c P, 2.1.2.a P, 2.1.2.e D, 2.2.2.a P			
Teach, Engage, and Explore		Guided/Independent Practice	
<ul style="list-style-type: none">Teacher will review what students have learned about computer coding.Teacher will introduce the term digital footprint - The information about someone on the internet.Teacher will ask students what they think it means to be safe online.Teacher will show Pause and Think video.Teacher will discuss the 3 kinds of websites.	<ul style="list-style-type: none">Students will complete the Animal Tracks Chart in groups of four.Students will work together to follow the digital trail of Mizzle the Mouse and Electra the Elephant.Students will take detailed notes and fill out their handouts as they go.Students will identify which animal had the biggest digital footprint.		
		Evaluate (formative assessment)	
		<ul style="list-style-type: none">Students will be assessed by completing Your Digital Footprint: Staying Safe and Responsible Assessment/ Digital Citizenship AssessmentStudents will be assessed by completing Stage 18: Your Digital Footprint 1 online.	

Course 2

<ul style="list-style-type: none">○ Green: websites that are safe and appropriate for kids, with appropriate words and doesn't let you talk to people you don't know.○ Yellow: a website that you aren't sure is appropriate for kids, that asks for personal information or is a place that you can freely chat with people you don't know.○ Red: A site that is not right for kids, meant for adults● Teacher will explain how to play Follow the Digital Trail.● Teacher will pass out the Animal Tracks chart.● After the activity, teacher will ask the students, "Which animal had the biggest digital footprint? Which animal can we find out more about and why? Was there any information posted online that could become a problem? Why?"	<ul style="list-style-type: none">● After the activity is complete, students will discuss what is appropriate and inappropriate information to share online.	
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Task Rubric

Standard	Description	Performance Indicators	Points
		Insert level 1 descriptor.	1
		Insert level 2 descriptor.	2
		Insert level 3 descriptor.	3
		Insert level 4 descriptor.	4
		Insert level 1 descriptor.	1
		Insert level 2 descriptor.	2
		Insert level 3 descriptor.	3
		Insert level 4 descriptor.	4
		Insert level 1 descriptor.	1
		Insert level 2 descriptor.	2
		Insert level 3 descriptor.	3
		Insert level 4 descriptor.	4

Insert grade level specific Ed Tech Scoring Rubric below (as the last page if needed) Insert grade level specific Ed Tech Scoring Rubric here